

Forbo 660 A

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 08/03/2018

Version: 2.1

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: forbo 660 A

Intended Use of the Product

Adhesive

Name, Address, and Telephone of the Responsible Party

Forbo Linoleum, Inc.
Humboldt Industrial Park
PO Box 667
Hazelton, PA 18202
800-842-7839

Manufacturer

Helmitin Inc.
11110 Airport Road
Olive Branch, MS 38654
Phone: 877.823.2624
www.helmitin.com

Emergency Telephone Number

Emergency Number : CHEMTREC 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Skin Irrit. 2 H315
Eye Irrit. 2A H319
Skin Sens. 1 H317
Repr. 2 H361
Aquatic Acute 3 H402
Aquatic Chronic 2 H411

Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H361 - Suspected of damaging fertility or the unborn child.
H402 - Harmful to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-US)

: P261 - Avoid breathing dust, mist, spray, vapors.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, and protective gloves.
P302+P352 - IF ON SKIN: Wash with plenty of water.

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)
Oxirane, methyl-, polymer with oxirane, ether with 1,2-propanediol (2:1), polymer with 1,3-diisocyanatomethylbenzene, nonylphenol-blocked (Polyurethane Prepolymer)	(CAS No) 102900-03-8	10 - 30
Bisphenol A-epichlorohydrin polymer	(CAS No) 25068-38-6	10 - 30
Alkyl (C12-14) glycidyl ether	(CAS No) 68609-97-2	5 - 10
Propanol, oxybis-, dibenzoate	(CAS No) 27138-31-4	1 - 5
Phenol, 4-nonyl-, branched	(CAS No) 84852-15-3	1 - 5
Quartz*	(CAS No) 14808-60-7	0.1 - 1

*This product contains a material that may be hazardous when present as an airborne dust. Since this product is in a liquid form, the material is not able to become airborne and cannot be inhaled. Thus, the hazards usually associated with this material are not applicable to this product.

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Inhalation: May cause respiratory irritation.

Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

Eye Contact: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Suspected of damaging fertility or the unborn child.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

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Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Silicon oxides.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (dust, vapor, mist, spray).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s)

No use specified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government

Quartz (14808-60-7)		
Mexico	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable fraction)
USA ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
USA OSHA	OSHA PEL (STEL) (mg/m ³)	250 mppcf/%SiO ₂ +5, 10mg/m ³ /%SiO ₂ +2
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³ (respirable dust)
USA IDLH	US IDLH (mg/m ³)	50 mg/m ³ (respirable dust)
Alberta	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable particulate)
British Columbia	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable)
Manitoba	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
New Brunswick	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable fraction)

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Newfoundland & Labrador	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Nova Scotia	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Nunavut	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable mass)
Northwest Territories	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable mass)
Ontario	OEL TWA (mg/m ³)	0.10 mg/m ³ (designated substances regulation-respirable)
Prince Edward Island	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Québec	VEMP (mg/m ³)	0.1 mg/m ³ (respirable dust)
Saskatchewan	OEL TWA (mg/m ³)	0.05 mg/m ³ (respirable fraction)
Yukon	OEL TWA (mg/m ³)	300 particle/mL

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Beige Paste
Odor	: Low Odor
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: 0 °C (32° F)
Boiling Point	: 204 - 218 °C (399.2 - 424.4 °F)
Flash Point	: > 93 °C (200 °F) Tag Closed Cup
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.4
Solubility	: Not available
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Approximately 55,000 cps

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- Explosion Data – Sensitivity to Mechanical Impact** : Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge : Not expected to present an explosion hazard due to static discharge.
VOC Content (SCAQMD Rule 1168) : <12 g/L (<0.1 lbs/gal)

SECTION 10: STABILITY AND REACTIVITY

- Reactivity:** Hazardous reactions will not occur under normal conditions.
Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.
Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.
Hazardous Decomposition Products: Thermal decomposition generates: Carbon oxides (CO, CO₂). Silicon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

- Acute Toxicity:** Not classified
LD50 and LC50 Data: Not available
Skin Corrosion/Irritation: Causes skin irritation.
Serious Eye Damage/Irritation: Causes serious eye irritation.
Respiratory or Skin Sensitization: May cause an allergic skin reaction.
Germ Cell Mutagenicity: Not classified
Teratogenicity: Not classified
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.
Symptoms/Injuries After Eye Contact: Redness, pain, swelling, itching, burning, tearing, and blurred vision.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.
Chronic Symptoms: Suspected of damaging fertility or the unborn child.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg
Phenol, 4-nonyl-, branched (84852-15-3)	
LD50 Oral Rat	580 mg/kg
LD50 Dermal Rabbit	2031 mg/kg
Bisphenol A-epichlorohydrin polymer (25068-38-6)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
Quartz (14808-60-7)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Toxic to aquatic life with long lasting effects. Harmful to aquatic life.

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Phenol, 4-nonyl-, branched (84852-15-3)	
LC50 Fish 1	0.135 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	0.1351 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
Bisphenol A-epichlorohydrin polymer (25068-38-6)	
LOEC (acute)	1 mg/l Daphnia magna
NOEC chronic crustacea	0.3 mg/l Daphnia magna

Persistence and Degradability Not available

Bioaccumulative Potential

Phenol, 4-nonyl-, branched (84852-15-3)	
BCF Fish 1	271

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A-(epichlorohydrin); epoxy resin)

Hazard Class : 9

Identification Number : UN3082

Packing Group : III

Label Codes : 9

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

Marine pollutant : Marine pollutant



In Accordance with IATA

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol A-(epichlorohydrin); epoxy resin)

Packing Group : III

Identification Number : UN3082

Hazard Class : 9

Label Codes : 9

ERG Code (IATA) : 9L



In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard
Quartz (14808-60-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Oxirane, methyl-, polymer with oxirane, ether with 1,2-propanediol (2:1), polymer with 1,3-diisocyanatomethylbenzene, nonylphenol-blocked (102900-03-8) (Polyurethane Prepolymer)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

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Phenol, 4-nonyl-, branched (84852-15-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
Bisphenol A-epichlorohydrin polymer (25068-38-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Alkyl (C12-14) glycidyl ether (68609-97-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
Propanol, oxybis-, dibenzoate (27138-31-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

US State Regulations

Proposition 65 –  **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Quartz (14808-60-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

Quartz (14808-60-7)
Listed on the Canadian DSL (Domestic Substances List)
Listed on the Canadian IDL (Ingredient Disclosure List)
IDL Concentration 1 %
Oxirane, methyl-, polymer with oxirane, ether with 1,2-propanediol (2:1), polymer with 1,3-diisocyanatomethylbenzene, nonylphenol-blocked (102900-03-8) (Polyurethane Prepolymer)
Listed on the Canadian DSL (Domestic Substances List)
Phenol, 4-nonyl-, branched (84852-15-3)
Listed on the Canadian DSL (Domestic Substances List)
Bisphenol A-epichlorohydrin polymer (25068-38-6)
Listed on the Canadian DSL (Domestic Substances List)
Alkyl (C12-14) glycidyl ether (68609-97-2)
Listed on the Canadian DSL (Domestic Substances List)
Propanol, oxybis-, dibenzoate (27138-31-4)
Listed on the Canadian DSL (Domestic Substances List)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 08/03/2018
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2015